



Tenneco Polymers
A Tenneco Company

NUMBER

MATERIAL SAFETY DATA

156

(Approved by U.S. Department of Labor as "essentially similar" to FORM OSHA-20)

SECTION I IDENTIFICATION OF PRODUCT

MANUFACTURER'S NAME TENNECO POLYMERS, INC., RESEARCH & DEVELOPMENT		EMERGENCY TELEPHONE NO. 609-386-9200 713-479-3411
ADDRESS RIVER ROAD, P.O. BOX 129, FLEMINGTON, NEW JERSEY 08822		
TRADE NAME AND SYNONYMS TENNECO PVC RESIN 175, 185, 190, 195, 200, 225, 225F, 225PG, 225SG, 250, 250-3, 10R, 501, 530, 540		
CHEMICAL NAME AND SYNONYMS POLY(VINYL CHLORIDE), PVC HOMOPOLYMER		
CHEMICAL FAMILY CHLOROHYDROCARBON POLYMER	MOLECULAR FORMULA (CH₂CHCl)_n	MOL. WT.

SECTION II HAZARDOUS COMPONENTS OF MIXTURES

COMPONENT	%	THRESHOLD LIMIT VALUE	COMPONENT	%	THRESHOLD LIMIT VALUE
OSHA Standard 1910.93q(.1017) on vinyl chloride sets a permissible exposure limit of 1ppm averaged over any 8 hr. period and 5ppm over any 15 min. period. On the basis that polyvinyl chloride may contain and release small amounts of monomer, the Standard applies to the manufacture, reaction, packaging, repackaging, storage, handling, use or transportation of PVC, but not to handling or use of "fabricated products", as defined, if not subject to processing sufficient in time or temperature to cause mass melting.					

SECTION III PHYSICAL DATA

APPEARANCE AND ODOR White powder, odorless	
BOILING POINT (DEGREES FAHRENHEIT) Not applicable	MELTING POINT (DEGREES FAHRENHEIT) Not applicable Softens about 160 - 180°F
VAPOR PRESSURE (MM. OF MERCURY) Not applicable	SPECIFIC GRAVITY (WATER = 1) 1.4
VAPOR DENSITY (AIR = 1) Not applicable	PERCENT VOLATILE (BY WEIGHT) Approx. 1% (Moisture)
SOLUBILITY IN WATER Negligible	EVAPORATION RATE (BUTYLACETATE = 1) Not applicable

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (SPECIFY METHOD) (DEGREES FAHRENHEIT) Ignition about 735°F auto- Ignition about 850°F (ASTM D-1929)	FLAMMABLE LIMITS (PERCENT BY VOLUME) Not applicable	LOWER	UPPER
FIRE EXTINGUISHING MEDIA Water spray, carbon dioxide or dry chemical.			
SPECIAL FIRE-FIGHTING PROCEDURES Water spray or fog may be helpful in reducing flame intensity and absorbing irritating fumes.			
UNUSUAL FIRE AND EXPLOSION HAZARDS NFPA lists ignition temperatures of 725°F for layer and 1220°F for PVC dust cloud. Produces combustible gases above 570°F. Fire conditions produce hydrogen chloride, requiring protective equipment.			

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MATERIAL SAFETY DATA

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SECTION I IDENTIFICATION OF PRODUCT

MANUFACTURER'S NAME TENNECO POLYMERS, INC., RESEARCH & DEVELOPMENT		EMERGENCY TELEPHONE NO. 609-386-9200
ADDRESS RIVER ROAD, P.O. BOX 129, FLEMINGTON, NEW JERSEY 08822		
TRADE NAME AND SYNONYMS TENNECO PVC DISPERSION RESIN 1716, 1730, 1732, 1735, 1738, 1742, 1750, 1755, 1756, 1757, 1759		
CHEMICAL NAME AND SYNONYMS POLY(VINYL CHLORIDE) PVC		
CHEMICAL FAMILY CHLOROHYDROCARBON POLYMER	MOLECULAR FORMULA (CH₂CHCl)_n	MOL. WT.

SECTION II HAZARDOUS COMPONENTS OF MIXTURES

COMPONENT	%	THRESHOLD LIMIT VALUE (UNITS)	COMPONENT	%	THRESHOLD LIMIT VALUE (UNITS)
OSHA Standard 1910.93q(.1017) on vinyl chloride sets a permissible exposure limit of 1ppm averaged over any 8 hr. period and 5ppm over any 15 minute period. On the basis that polyvinyl chloride may contain and release small amounts of monomer, the Standard applied to the manufacture, reaction, packaging, repackaging, storage, handling, use or transportation of PVC, but not to handling or use of "fabricated products", as defined, if not subject to processing sufficient in time or temperature to cause mass melting.					

SECTION III PHYSICAL DATA

APPEARANCE AND ODOR White powder, odorless.	
BOILING POINT (DEGREES FAHRENHEIT) Not applicable	MELTING POINT (DEGREES FAHRENHEIT) Not applicable Softens about 160 - 180°F
VAPOR PRESSURE (MM. OF MERCURY) Not applicable	SPECIFIC GRAVITY (WATER = 1) 1.4
VAPOR DENSITY (AIR = 1) Not applicable	PERCENT VOLATILE (BY WEIGHT) Approximately 1% (moisture)
SOLUBILITY IN WATER Negligible	EVAPORATION RATE (BUTYLACETATE = 1) Not applicable

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (SPECIFY METHOD) (DEGREES FAHRENHEIT) Ignition about 735°F auto Ignition about 850°F (ASTM 1929)	FLAMMABLE LIMITS (PERCENT BY VOLUME) Not applicable.	LOWER	UPPER
FIRE EXTINGUISHING MEDIA Water spray, carbon dioxide or dry chemical.			
SPECIAL FIRE-FIGHTING PROCEDURES Water spray or fog may be helpful in reducing flame intensity and absorbing irritating fumes.			
UNUSUAL FIRE AND EXPLOSION HAZARDS NFPA lists ignition temperatures of 752°F for layer and 1220°F for PVC dust cloud. Produces combustible gases above 570°F. Fire conditions produce hydrogen chloride, requiring protective equipment.			

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Tenneco Polymers
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NUMBER

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MATERIAL SAFETY DATA

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SECTION I IDENTIFICATION OF PRODUCT

MANUFACTURER'S NAME TENNECO POLYMERS, INC., RESEARCH & DEVELOPMENT		EMERGENCY TELEPHONE NO. 609-386-9200 201-782-4011
ADDRESS RIVER ROAD, P.O. BOX 129, FLEMINGTON, NEW JERSEY 08822		
TRADE NAME AND SYNONYMS TENNECO PVC COPOLYMER RESIN 305, 314, 315, 318, 382, 388, 389, 390, 391, 400, 521		
CHEMICAL NAME AND SYNONYMS VINYLCHLORIDE - VINYL ACETATE COPOLYMER, VC/VAc COPOLYMER		
CHEMICAL FAMILY CHLOROHYDROCARBON COPOLYMER	MOLECULAR FORMULA $\{CH_2CHCl\}_x\{CH_2CHOCOCH_3\}_y$	MOL. WT.

SECTION II HAZARDOUS COMPONENTS OF MIXTURES

COMPONENT	%	THRESHOLD LIMIT VALUE	COMPONENT	%	THRESHOLD LIMIT VALUE
(UNITS) OSHA Standard 1910.93q(.1017) on vinyl chloride sets a permissible exposure limit of 1ppm averaged over any 8 hr. period and 5ppm over any 15 minute period. On the basis that polyvinyl chloride may contain and release small amounts of monomer, the Standard applies to the manufacture, reaction, packaging, repackaging, storage, handling, use or transportation of PVC, but not to handling or use of "fabricated products", as defined, if not subject to processing sufficient in time or temperature to cause mass melting. (UNITS)					

SECTION III PHYSICAL DATA

APPEARANCE AND ODOR White powder, faint ester odor.	
BOILING POINT (DEGREES FAHRENHEIT) Not applicable	MELTING POINT (DEGREES FAHRENHEIT) Not applicable Softens about 140 - 160°F.
VAPOR PRESSURE (MM. OF MERCURY) Not applicable	SPECIFIC GRAVITY (WATER = 1) 1.35 - 1.4
VAPOR DENSITY (AIR = 1) Not applicable	PERCENT VOLATILE (BY WEIGHT) Approximately 1% (moisture)
SOLUBILITY IN WATER Negligible	EVAPORATION RATE (BUTYLACETATE = 1) Not applicable

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (SPECIFY METHOD) (DEGREES FAHRENHEIT) Ignition about 735°F for PVC (ASTM D-1929).	FLAMMABLE LIMITS (PERCENT BY VOLUME) LOWER UPPER Not applicable
FIRE EXTINGUISHING MEDIA Water spray, carbon dioxide or dry chemical.	
SPECIAL FIRE-FIGHTING PROCEDURES Water spray or fog may be helpful in reducing flame intensity and absorbing irritating fumes.	
UNUSUAL FIRE AND EXPLOSION HAZARDS NFPA lists ignition temperature of 1274°F for dust cloud. Produces combustible gases above 570°F. Fire conditions produce hydrogen chloride, requiring protective equipment.	

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Tenneco Polymers
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MATERIAL SAFETY DATA

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SECTION I IDENTIFICATION OF PRODUCT		
MANUFACTURER'S NAME TENNECO POLYMERS, INC., RESEARCH & DEVELOPMENT		EMERGENCY TELEPHONE NO. 609-386-9200
ADDRESS RIVER ROAD, P.O. BOX 129, FLEMINGTON, NEW JERSEY 08822		
TRADE NAME AND SYNONYMS TENNECO PVC COPOLYMER DISPERSION RESIN 0565, 0665 (0565-1)		
CHEMICAL NAME AND SYNONYMS VINYLCHLORIDE - VINYL ACETATE COPOLYMER, VC/VAc COPOLYMER		
CHEMICAL FAMILY CHLOROHYDROCARBON COPOLYMER	MOLECULAR FORMULA $\{CH_2CHCl\}_x\{CH_2CHOCOCH_3\}_y$	MOL. WT.

SECTION II HAZARDOUS COMPONENTS OF MIXTURES					
COMPONENT	%	THRESHOLD LIMIT VALUE	COMPONENT	%	THRESHOLD LIMIT VALUE
OSHA Standard 1910.93q(.1017) on vinyl chloride sets a permissible exposure limit of 1ppm averaged over any 8 hr. period and 5ppm over any 15 minute period. On the basis that polyvinyl chloride may contain and release small amounts of monomer, the Standard applies to the manufacture, reaction, packaging, repackaging, storage, handling, use or transportation of PVC, but not to handling or use of "fabricated products", as defined, if not subject to processing sufficient in time or temperature to cause mass melting.					

SECTION III PHYSICAL DATA	
APPEARANCE AND ODOR White powder, faint ester odor.	
BOILING POINT (DEGREES FAHRENHEIT) Not applicable	MELTING POINT (DEGREES FAHRENHEIT) Not applicable Softens about 140 - 160°F.
VAPOR PRESSURE (MM. OF MERCURY) Not applicable	SPECIFIC GRAVITY (WATER = 1) 1.4
VAPOR DENSITY (AIR = 1) Not applicable	PERCENT VOLATILE (BY WEIGHT) Approximately 1% (Moisture)
SOLUBILITY IN WATER Negligible	EVAPORATION RATE (BUTYLACETATE = 1) Not applicable

SECTION IV FIRE AND EXPLOSION HAZARD DATA		
FLASH POINT (SPECIFY METHOD) (DEGREES FAHRENHEIT) Ignition about 735°F for PVC (ASTM D-1929)	FLAMMABLE LIMITS (PERCENT BY VOLUME)	LOWER UPPER Not applicable
FIRE EXTINGUISHING MEDIA Water spray, carbon dioxide or dry chemical.		
SPECIAL FIRE-FIGHTING PROCEDURES Water spray or fog may be helpful in reducing flame intensity and absorbing irritating fumes.		
UNUSUAL FIRE AND EXPLOSION HAZARDS NFPA lists ignition temperature of 1274°F for dust cloud. Produces combustible gases above 570°F. Fire conditions produce hydrogen chloride, requiring protective equipment.		

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MATERIAL SAFETY DATA

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SECTION I IDENTIFICATION OF PRODUCT	
MANUFACTURER'S NAME TENNECO POLYMERS, INC., RESEARCH & DEVELOPMENT	EMERGENCY TELEPHONE NO. 609-386-9200
ADDRESS RIVER ROAD, P.O. BOX 129, FLEMINGTON, NEW JERSEY 08822	
TRADE NAME AND SYNONYMS WIRE & 2022, 2022A, 2024, 2025, 2052, 2060, 2300, 2385, 2580, TENNECO PVC COMPOUND, CABLE 2700, 2710C, 2710C4, 2712, 2714, 2730, 2775, 2780, 2800,	
CHEMICAL NAME AND SYNONYMS 2803, 2804, 2814, 2814-1F, 2820, 2825, 2826, 2880, 2900, 2901-1, POLY(VINYL CHLORIDE) COMPOUND, PLASTICIZED (FLEXIBLE) 2905, 2908, 2914, 2922, 2951	
CHEMICAL FAMILY CHLOROHYDROCARBON POLYMER	MOLECULAR FORMULA (CH₂CHCl)_n MOL. WT

SECTION II HAZARDOUS COMPONENTS OF MIXTURES					
COMPONENT	%	THRESHOLD LIMIT VALUE	COMPONENT	%	THRESHOLD LIMIT VALUE
Antimony Compound	(0-2.5%)	0.5 mg/m ³ (UNITS)	Diglycidyl Ether	(0-0.2%)	0.5 (UNITS)
Barium Compounds	(0-0.8%)	0.5 mg/m ³	Lead Compounds	(0-6.0%)	0.2 mg/m ³
Carbon Black	(0-1.2%)	3.5 mg/m ³	Mineral Oil	(0-0.3%)	5 mg/m ³
Diethylhexyl Phthalate	(0- 30%)	5.0 mg/m ³	Titanium Dioxide	(0-7.0%)	15 mg/m ³

SECTION III PHYSICAL DATA	
APPEARANCE AND ODOR Colorless, white, black or colored pellets, practically odorless.	
BOILING POINT (DEGREES FAHRENHEIT) Not applicable	MELTING POINT (DEGREES FAHRENHEIT) Not applicable Softens about 160 - 180°F
VAPOR PRESSURE (MM. OF MERCURY) Not applicable	SPECIFIC GRAVITY (WATER = 1) 1.22 - 1.48
VAPOR DENSITY (AIR = 1) Not applicable	PERCENT VOLATILE (BY WEIGHT) Essentially non-volatile
SOLUBILITY IN WATER Negligible	EVAPORATION RATE (BUTYLACETATE = 1) Not applicable

SECTION IV FIRE AND EXPLOSION HAZARD DATA		
FLASH POINT (SPECIFY METHOD) (DEGREES FAHRENHEIT) Not applicable Plasticizer generally over 400°F, COC	FLAMMABLE LIMITS (PERCENT BY VOLUME)	LOWER UPPER Not applicable
FIRE EXTINGUISHING MEDIA Water spray, carbon dioxide or dry chemical.		
SPECIAL FIRE-FIGHTING PROCEDURES Water spray or fog may be helpful in reducing flame intensity and absorbing irritating fumes. Shut off current in electrical equipment or wiring.		
UNUSUAL FIRE AND EXPLOSION HAZARDS NFPA lists ignition temperature of 608°F for PVC plasticizer dust cloud and minimum concentration of 0.035 oz/cu. ft. Fire conditions produce hydrogen chloride, requiring protective equipment.		

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Tenneco Polymers
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NUMBER

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MATERIAL SAFETY DATA

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SECTION I IDENTIFICATION OF PRODUCT		
MANUFACTURER'S NAME TENNECO POLYMERS, INC., RESEARCH AND DEVELOPMENT		EMERGENCY TELEPHONE NO. 609-386-9200
ADDRESS P.O. BOX 129, RIVER ROAD, FLEMINGTON, NEW JERSEY 08822		
TRADE NAME AND SYNONYMS EXTRUSION 3026, 3063, 3066, 3078, 3083, 3086, 3092, 3098, TENNECO PVC COMPOUND, & MOLDING 3153M, 3159, 3160, 3169, 3179, 3189, 3200, 3211		
CHEMICAL NAME AND SYNONYMS POLY(VINYL CHLORIDE) COMPOUND PLASTICIZED (FLEXIBLE)		
CHEMICAL FAMILY CHLOROHYDROCARBON POLYMER	MOLECULAR FORMULA (CH₂CHCl)_n	MOL. WT.

SECTION II HAZARDOUS COMPONENTS OF MIXTURES					
COMPONENT	%	THRESHOLD LIMIT VALUE	COMPONENT	%	THRESHOLD LIMIT VALUE
(UNITS)					
Barium Compounds	(0-1.3%)	- 0.5 mg/m ³	Titanium Dioxide	(0- 1%)	- 15 mg/m ³
Diethylhexyl Phthalate	(0- 38%)	- 5 mg/m ³	Carbon Black	(0-0.5%)	- 3.5 mg/m ³
Mineral Oil	(0-0.8%)	- 5 mg/m ³			
Tin Organic Comp.	(0-2.3%)	- 0.1 mg/m ³			
Epoxidized Soybean Oil	(0-2.5%)	- 0.5 mg/m ³			

SECTION III PHYSICAL DATA	
APPEARANCE AND ODOR Colorless, white, black or colored pellets, practically odorless.	
BOILING POINT (DEGREES FAHRENHEIT) Not applicable	MELTING POINT (DEGREES FAHRENHEIT) Not applicable Softens about 160 - 180°F
VAPOR PRESSURE (MM. OF MERCURY) Not applicable	SPECIFIC GRAVITY (WATER = 1) 1.20 - 1.40
VAPOR DENSITY (AIR = 1) Not applicable	PERCENT VOLATILE (BY WEIGHT) Essentially non-volatile
SOLUBILITY IN WATER Negligible	EVAPORATION RATE (BUTYLACETATE = 1) Not applicable

SECTION IV FIRE AND EXPLOSION HAZARD DATA			
FLASH POINT (SPECIFY METHOD) Not applicable Plasticizer generally over 400°F, COC	FLAMMABLE LIMITS (PERCENT BY VOLUME)	LOWER	UPPER
		Not applicable	
FIRE EXTINGUISHING MEDIA Water spray, carbon dioxide or dry chemical.			
SPECIAL FIRE-FIGHTING PROCEDURES Water spray or fog may be helpful in reducing flame intensity and absorbing irritating fumes. Shut off current in electrical equipment or wiring.			
UNUSUAL FIRE AND EXPLOSION HAZARDS NFPA lists ignition temperature of 608°F for PVC-plasticizer dust cloud and minimum concentration of 0.035 oz.cu. ft. Fire conditions produce hydrogen chloride, requiring protective equipment.			

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Tenneco Polymers
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MATERIAL SAFETY DATA

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SECTION I IDENTIFICATION OF PRODUCT		
MANUFACTURER'S NAME TENNECO POLYMERS, INC., RESEARCH & DEVELOPMENT		EMERGENCY TELEPHONE NO. 609-386-9200
ADDRESS RIVER ROAD, P.O. BOX 129, FLEMINGTON, NEW JERSEY 08822		
TRADE NAME AND SYNONYMS TENNECO PVC COMPOUND, RIGID 3711, 3750, 4703		
CHEMICAL NAME AND SYNONYMS POLY(VINYL CHLORIDE) COMPOUND		
CHEMICAL FAMILY CHLOROHYDROCARBON POLYMER	MOLECULAR FORMULA (CH₂CHCl)_n	MOL. WT.

SECTION II HAZARDOUS COMPONENTS OF MIXTURES							
COMPONENT		%	THRESHOLD LIMIT VALUE	COMPONENT		%	THRESHOLD LIMIT VALUE
			(UNITS)				(UNITS)
Carbon Black	(0-0.6%)	-	3.5 mg/m ³	Tin Organic Compound	(0-2%)	-	0.1 mg/m ³
Lead Compounds	(0 - 4%)	-	0.2 mg/m ³	Titanium Dioxide	(0-1%)	-	15 mg/m ³
Mineral Oil	(0-0.5%)	-	5 mg/m ³				

SECTION III PHYSICAL DATA	
APPEARANCE AND ODOR White, Black or Colored Pellets, practically odorless.	
BOILING POINT (DEGREES FAHRENHEIT) Not applicable	MELTING POINT (DEGREES FAHRENHEIT) Not applicable Softens about 160 - 180°F
VAPOR PRESSURE (MM. OF MERCURY) Not applicable	SPECIFIC GRAVITY (WATER = 1) 1.32 - 1.42
VAPOR DENSITY (AIR = 1) Not applicable	PERCENT VOLATILE (BY WEIGHT) Essentially non-volatile
SOLUBILITY IN WATER Negligible	EVAPORATION RATE (BUTYLACETATE = 1) Not applicable

SECTION IV FIRE AND EXPLOSION HAZARD DATA		
FLASH POINT (SPECIFY METHOD) (DEGREES FAHRENHEIT) Ignition about 735°F auto- Ignition about 850°F (ASTM D-1929)	FLAMMABLE LIMITS (PERCENT BY VOLUME) Not applicable.	LOWER UPPER
FIRE EXTINGUISHING MEDIA Water spray, carbon dioxide or dry chemical.		
SPECIAL FIRE-FIGHTING PROCEDURES Water spray or fog may be helpful in reducing flame intensity and absorbing irritating fumes. Shut off current in electrical equipment or wiring.		
UNUSUAL FIRE AND EXPLOSION HAZARDS NFPA lists ignition temperature of 752°F for layer and 1220°F for PVC dust cloud. Produces combustible gases above 570°F. Fire conditions produce hydrogen chloride, requiring protective equipment.		



Tenneco Polymers
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MATERIAL SAFETY DATA

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SECTION I IDENTIFICATION OF PRODUCT

MANUFACTURER'S NAME TENNECO POLYMERS, INC., RESEARCH & DEVELOPMENT		EMERGENCY TELEPHONE NO. 609-386-9200
ADDRESS RIVER ROAD, P.O. BOX 129, FLEMINGTON, NEW JERSEY 08822		
TRADE NAME AND SYNONYMS TENNECO PVC COMPOUND, RIGID 3773, 3774, 3775		
CHEMICAL NAME AND SYNONYMS POLY(VINYL CHLORIDE) COMPOUND		
CHEMICAL FAMILY CHLOROHYDROCARBON POLYMER	MOLECULAR FORMULA (CH₂CHCl)_n	MOL. WT.

SECTION II HAZARDOUS COMPONENTS OF MIXTURES

COMPONENT	%	THRESHOLD LIMIT VALUE	COMPONENT	%	THRESHOLD LIMIT VALUE
(UNITS)					
Tin Organic Compound (0-3%) - 0.1 mg/m ³					
(UNITS)					

SECTION III PHYSICAL DATA

APPEARANCE AND ODOR White or colored pellets, practically odorless.	
BOILING POINT (DEGREES FAHRENHEIT) Not applicable	MELTING POINT (DEGREES FAHRENHEIT) Not applicable Softens about 160 - 180°F
VAPOR PRESSURE (MM. OF MERCURY) Not applicable	SPECIFIC GRAVITY (WATER = 1) 3773, 3775 1.44 - 1.48 3774 1.40 - 1.44
VAPOR DENSITY (AIR = 1) Not applicable	PERCENT VOLATILE (BY WEIGHT) Essentially non-volatile
SOLUBILITY IN WATER Negligible	EVAPORATION RATE (BUTYLACETATE = 1) Not applicable

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (SPECIFY METHOD) (DEGREES FAHRENHEIT) Ignition about 735°F auto- Ignition about 850°F (ASTM D-1929)	FLAMMABLE LIMITS (PERCENT BY VOLUME) Not applicable	LOWER	UPPER
FIRE EXTINGUISHING MEDIA Water spray, carbon dioxide or dry chemical.			
SPECIAL FIRE-FIGHTING PROCEDURES Water spray or fog may be helpful in reducing flame intensity and absorbing irritating fumes. Shut off current in electrical equipment or wiring.			
UNUSUAL FIRE AND EXPLOSION HAZARDS NFPA lists ignition temperature of 752°F for layer and 1220°F for PVC dust cloud. Produces combustible gases above 570°F. Fire conditions produce hydrogen chloride, requiring protective equipment.			

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MATERIAL SAFETY DATA

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SECTION I IDENTIFICATION OF PRODUCT

MANUFACTURER'S NAME TENNECO POLYMERS, INC., RESEARCH & DEVELOPMENT		EMERGENCY TELEPHONE NO. 609-386-9200
ADDRESS RIVER ROAD, P.O. BOX 129, FLEMINGTON, NEW JERSEY 08822		
TRADE NAME AND SYNONYMS TENNECO PVC COMPOUND, RIGID 3780, 3782		
CHEMICAL NAME AND SYNONYMS POLY(VINYL CHLORIDE) COMPOUND		
CHEMICAL FAMILY CHLOROHYDROCARBON POLYMER	MOLECULAR FORMULA (CH₂CHCl)_n	MOL. WT.

SECTION II HAZARDOUS COMPONENTS OF MIXTURES

COMPONENT	%	THRESHOLD LIMIT VALUE	COMPONENT	%	THRESHOLD LIMIT VALUE
		(UNITS)			(UNITS)
Tin Organic Compound	(0-3%)	0.1 mg/m ³			
Acrylic Resin	(0-2%)	10 mg/m ³ (ACGIH)			

SECTION III PHYSICAL DATA

APPEARANCE AND ODOR White or colored pellets, practically odorless.	
BOILING POINT (DEGREES FAHRENHEIT) Not applicable	MELTING POINT (DEGREES FAHRENHEIT) Not applicable Softens about 160 - 180°F
VAPOR PRESSURE (MM. OF MERCURY) Not applicable	SPECIFIC GRAVITY (WATER = 1) 1.32 - 1.42
VAPOR DENSITY (AIR = 1) Not applicable	PERCENT VOLATILE (BY WEIGHT) Essentially non-volatile
SOLUBILITY IN WATER Negligible	EVAPORATION RATE (BUTYLACETATE = 1) Not applicable

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (SPECIFY METHOD) (DEGREES FAHRENHEIT) Ignition about 735°F auto- ignition about 850°F (ASTM D-1929)	FLAMMABLE LIMITS (PERCENT BY VOLUME) Not applicable	LOWER	UPPER
FIRE EXTINGUISHING MEDIA Water spray, carbon dioxide or dry chemical			
SPECIAL FIRE-FIGHTING PROCEDURES Water spray or fog may be helpful in reducing flame intensity and absorbing irritating fumes. Shut off current in electrical equipment or wiring.			
UNUSUAL FIRE AND EXPLOSION HAZARDS NFPA lists ignition temperature of 752°F for layer and 1220°F for PVC dust cloud. Produces combustible gases above 570°F. Fire conditions produce hydrogen chloride, requiring protective equipment.			

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Tenneco Polymers
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MATERIAL SAFETY DATA

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MANUFACTURER'S NAME TENNECO POLYMERS, INC., RESEARCH AND DEVELOPMENT		EMERGENCY TELEPHONE NO. 609-386-9200
ADDRESS P.O. BOX 129, RIVER ROAD, FLEMINGTON, NEW JERSEY 08822		
TRADE NAME AND SYNONYMS 1684, 1688, 1689, 1755-1, 1755-5, 1776-2, TENNECO PVC COMPOUND, RECORD 1809, 1815-2, 1820-6		
CHEMICAL NAME AND SYNONYMS VINYL CHLORIDE - VINYL ACETATE COPOLYMER		
CHEMICAL FAMILY CHLOROHYDROCARBON COPOLYMER	MOLECULAR FORMULA {CH₂CHCl}_x {CH₂CHOCOCH₃}_y	
		MOL. WT.

SECTION II HAZARDOUS COMPONENTS OF MIXTURES

COMPONENT	%	THRESHOLD LIMIT VALUE	COMPONENT	%	THRESHOLD LIMIT VALUE
		(UNITS)			(UNITS)
Carbon Black	(0.1-1%)	3.5 mg/m ³			
Lead Compounds	(0 -2%)	0.2 mg/m ³			

SECTION III PHYSICAL DATA

APPEARANCE AND ODOR Black pellets, practically odorless	
BOILING POINT (DEGREES FAHRENHEIT) Not applicable	MELTING POINT (DEGREES FAHRENHEIT) Not applicable Softens about 130-150°F
VAPOR PRESSURE (MM OF MERCURY) Not applicable	SPECIFIC GRAVITY (WATER = 1) 1.35 - 1.39
VAPOR DENSITY (AIR = 1) Not applicable	PERCENT VOLATILE (BY WEIGHT) Essentially non-volatile
SOLUBILITY IN WATER Negligible	EVAPORATION RATE (BUTYLACETATE = 1) Not applicable

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (SPECIFY METHOD) Ignition about 735°F (DEGREES FAHRENHEIT) for PVC (ASTM D-1929)	FLAMMABLE LIMITS (PERCENT BY VOLUME) LOWER UPPER Not applicable
FIRE EXTINGUISHING MEDIA Water spray, carbon dioxide or dry chemical	
SPECIAL FIRE-FIGHTING PROCEDURES Water spray or fog may be helpful in reducing flame intensity and absorbing irritating fumes. Shut off current in electrical equipment or wiring.	
UNUSUAL FIRE AND EXPLOSION HAZARDS NFPA lists ignition temperature of 608°F for PVC-plasticizer dust cloud and minimum concentration of 0.035 oz./cu. ft. Fire conditions produce hydrogen chloride, requiring protective equipment.	

TEN0121



MATERIAL SAFETY DATA SHEET

TENNECO POLYMERS, INC.
P. O. BOX 2511
HOUSTON, TX 77001

MATERIAL Methanol

MSDS NO. 110 DATE 3/85

I. MATERIAL IDENTIFICATION

MATERIAL / TRADE NAME Methanol

24 HOUR EMERGENCY TELEPHONE

TENNECO 713 479-3411

CHEMTREC 800 424-9300

SYNONYMS Methyl Alcohol, Wood Alcohol, Carbinol

CHEMICAL FAMILY / FORMULA Alcohols/ CH_3OH

CAS NO. 67-56-1

HAZARD RATING*

1 HEALTH

3 FIRE

0 REACTIVITY

0 LEAST 3 HIGH
1 SLIGHT 4 EXTREME
2 MODERATE * NFPA 704

II. INGREDIENTS

COMPOSITION

Methyl Alcohol

%

99.9

TOXICITY DATA

8 hr TWA 200ppm ($260\text{mg}/\text{m}^3$) (skin)

Human

Eye-5ppm

Oral-LDLo 340mg/kg

Inhalation-TCLo $86000\text{mg}/\text{m}^3$ (irritator)

Rat - Oral

LD₅₀ 13gm/kg

III. PHYSICAL DATA

BOILING POINT, 760mm/Hg - 148°F (64.5°C)

SOLUBILITY IN H_2O , % BY WEIGHT - Totally miscible

SPECIFIC GRAVITY, $\text{H}_2\text{O} = 1$ - 0.791

EVAPORATION RATE, BUTYL ACETATE = 1 - 4.6

VAPOR PRESSURE, mm/Hg - 96 @ 68°F (20°C)

Molecular Weight - 32.04

VAPOR DENSITY, AIR = 1 - 1.11

Melting Point - -144°F (-97.3°C)

VOLATILES, % BY VOLUME - 100

APPEARANCE AND ODOR Clear, colorless liquid with characteristic alcohol odor. Less pure grades may have a pungent, oily odor.

IV FIRE AND EXPLOSION DATA

FLASH POINT AND TEST METHOD

54°F (12.2°C) TCC

AUTO IGNITION TEMPERATURE

867°F (464°C)

FLAMMABILITY LIMITS IN AIR, % BY VOLUME

LOWER 6 UPPER 36.5

EXINGUISHING MEDIA

Dry chemical, alcohol type foam, CO_2 . Water may be ineffective. Use water spray to cool fire exposed containers. Use alcohol resistant foam to extinguish large fires or to blanket spill to reduce vapors.

SPECIAL FIRE FIGHTING PROCEDURES

Class IB flammable liquid. Avoid water streams which may splash and spread flammable liquid. Vapors are heavier than air and may flow along surfaces to distant ignition sources and flash back. Fire fighters should use self-contained breathing equipment and protective clothing for fires in enclosed areas.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Reacts violently to oxidizers. Keep away from heat, sources of ignition. Burns with a clear, almost invisible flame, especially hard to see in strong light.

TEN0122

MSDS NO.

110

MATERIAL

Methanol

IX. EMPLOYEE PROTECTION**RESPIRATORY PROTECTION**

Provide adequate ventilation or exhaust to meet TLV requirements. Air supplied or self-contained breathing equipment recommended for exposures above TLV.

PROTECTIVE CLOTHING

Rubber gloves and rubber protective aprons or clothing required to prevent skin contact. Goggles or face shield should be used to protect face and eyes from splashing.

OTHER PROTECTIVE MEASURES

Eye wash and safety shower should be provided in area of use.

X. ENVIRONMENTAL PROTECTION**SPILL CLEAN-UP PROCEDURE**

Eliminate all ignition sources. Stop spill or leak if it can be done safely. Contain spill to smallest area possible. Use absorbent materials to soak up small spills. Larger spills should be recovered for reuse or disposal. Spills in critical areas can be diluted with water to reduce fire hazard during cleanup.

Do not allow to material to enter sewers, drains or waterways.

WASTE DISPOSAL

Waste materials should be disposed of by a licensed solvent waste disposal company. Federal, state and local regulations must be followed.

ENVIRONMENTAL HAZARDS

Aquatic toxicity rating - TLm 96: over 1000 ppm.

XI. SPECIAL PRECAUTIONS

Store in closed containers in cool place.

No smoking allowed in areas of use or storage.

Use explosion-proof electrical fixtures.

Containers should be electrically grounded/bonded during material transfer to prevent static spark.

Corrosive to lead and aluminum.